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CTC Archive Status Report: Operations and Maintenance Support for the CTC Archive

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13. ABSTRACT (Maximum 200 words)

The primary purpose of this report is to provide a status of the Archive as of 30 September 1994. This status report will cover both the physical data sources and the digitized databases. In addition, this report will include an Archive Project Summary and a listing of Archive Issues that impact upon Archive operations and data analyses.

The Archive project provides for the continuing operation, maintenance and support of the Archive Facility, the physical data materials, and the digital databases. The scope of the Archive effort includes three major areas: 1) Management of the CTC Archive Data Materials 2) Provision of ADP support for the Archive databases 3) Assistance with CTC Archive and Research Center Course.

The CTC Archive provides an invaluable resource for military analysts to systematically identify, prioritize and resolve Army warfighting issues. Several areas of concern currently exist that may have pronounced effects upon the Archive and may reduce the Archive's effectiveness as a resource for data analyses. These concerns are identified and the potential impact on the Archive capabilities are described.

14. SUBJECT TERMS
Local Area Network (LAN), Combined Arms Command (CAC), Combat
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CTC ARCHIVE STATUS REPORT: OPERATIONS AND MAINTENANCE SUPPORT FOR THE CTC ARCHIVE

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CTC ARCHIVE STATUS REPORT:
OPERATIONS AND MAINTENANCE SUPPORT FOR THE CTC ARCHIVE

I. BACKGROUND

The Army Research Institute (ARI) has been tasked to establish and maintain a training data archive of all unit performance data derived from training conducted at the combat training centers. The Army Research Institute at the Presidio of Monterey (ARI-POM) has been assigned the responsibility of operating and maintaining the Combat Training Center (CTC) Archive. The CTC Archive contains unit performance data from the National Training Center (NTC), the Joint Readiness Training Center (JRTC), and the Combat Maneuver Training Center (CMTC).

Military units deploy to the training centers periodically to train in the most realistic conditions short of actual combat. After each training cycle or rotation, unit performance data are sent to ARI-POM for inclusion into the Archive databases. The Archive data are available to analysts and researchers from the Department of Defense for identifying and analyzing issues related to Doctrine, Organization, Training, Material, Leadership and Soldiers (DOTMLS). In addition, ARI-POM and the Center for Army Lessons Learned (CALL) use the Archive and the Analysis Facility to conduct CTC Data Analysis Certification Workshops for military analysts and researchers.

II. OBJECTIVE

The primary purpose of this report is to provide a status of the Archive as of 30 September 1994. This status report will cover both the physical data sources and the digitized databases. In addition, this report will include an Archive Project Summary and a listing of Archive Issues that impact upon Archive operations and data analyses.

III. PROJECT SUMMARY

The Archive project provides for the continuing operation, maintenance and support of the Archive Facility, the physical data materials, and the digital databases. The scope of the Archive effort includes three major areas:

- Management of the CTC Archive Data Materials

- Provision of ADP support for the Archive databases

- Assistance with CTC Archive and Research Center Course

Management of the CTC Archive Data Materials

The management of the CTC Archive data materials involves processing the physical materials (documents, tapes, etc) that arrive from the CTCs so that they are properly maintained for ready access. It also involves extracting information from these physical items and entering that information into various electronic databases.

Provision of ADP Support for the Archive Databases

Data arrives from the CTCs in a variety of formats. There is a need to provide specialized programming services to facilitate the extraction of data from the original sources and the entry of this data into the databases that will be used by researchers. ADP support also includes the installation and maintenance of hardware and commercial off-the-shelf software applications that enable analysts to access and study the data by using either the Local Area Network (LAN) or the remote linkage capability.

Maintenance and conduct of CTC Archive and Research Center Training Course

ARI-POM conducts the CTC Archive and Research Center Course (Workshop) for the Combined Arms Command (CAC). There are two versions of this course. One version is conducted quarterly at the Presidio of Monterey (POM). The other version is a remote course which is conducted at sites that have a remote Combat Analyst Workstation (CAW). Workshop support included assisting the ARI staff with the maintenance and conduct of the course. Assistance included the following:

(1) Revision of the training modules for the on-site and remote versions of the course quarterly to reflect modifications to the existing procedures for the Combat Analyst Workstation.

(2) Service as facilitators during the quarterly on-site course.

(3) Consultation with course members during the on-site course about the design and scope of their individual research projects.

IV. ARCHIVE STATUS REPORT
As of 30 September 1994

The Archive Status Report provides a status of the CTC Archive as of 30 September 1994. This status "snapshot" covers both the physical data sources and the digitized databases. The status report begins with a list and general descriptions of the data sources held in the Archive. Next, the report provides a listing and the descriptions of the Archive databases. This Archive Status Report culminates with a detailed status of the Archive data sources and databases as of 30 September 1994.

A. Archive Data Sources

> After Action Review (AAR) videocassettes
> Communications tapes
> Digital Data
> Graphics
> Orders/Plans
> Scenario Documents
> Take Home Package (THP)
> Other Supporting Documents

AAR videocassettes are received from all CTCs. The videocassettes contain After Action Reviews at all echelons including Division (limited), Brigade, Battalion, Company, and Platoon.

Communications audio tapes from CMTC and NTC only. These are one inch, open reel, 40-track tapes containing radio communications among the player units during a given time period.

Digital Data includes any and all digital files received by the Archive. These include: NTC instrumented data tapes, NTC and JRTC diskette version of their THPs, and JRTC training and evaluation outline (T&EO) diskettes and video listings. Other digital information exists, such as AAR tape inventory lists and early NTC orders and plans, but these are not used for database creation.

Graphics include battlefield graphics created and employed by player units. Also included are a number of instrumented graphics. These are received from all CTCs, though JRTC does not often send the large, acetate overlays. CMTC sends a reduced paper version (included with the THP).

Orders and Plans are held for all CTCs, for both BLUEFOR and OPFOR player units, when furnished. Corps, Brigade, and Battalion/TF level operations orders and plans are held for all CTCs. CMTC sends Orders and Plans as part of an integrated THP. NTC and JRTC Orders and Plans are held in the Archive with other rotational paper data.

Scenario documents are those defining the notional enemy, the Civil Affairs situation, etc.

THP is the narrative summary of unit performance by BOS, echelon, and mission. In addition, it contains some Battle Damage Assessment data broken down by mission, and sub-element. The CTC Archive receives a copy of this document for each rotation and from each CTC. Diskette versions are received from JRTC and NTC (see Digital Data above).

Other Supporting Documentation may include Signal Operating Instructions (SOIs) for use with Communications tapes, Staff Duty Journals/Logs, and Artillery firing data documents, to name a few. Some of these document types are sent to the Archive from each of the CTCs. More often, such documents are unique to the issuing CTC.

Even in cases where the information is similar, its presentation and format are often unique to the CTC that sent it.

B. Archive Digital Databases

The data sources are used to load Archive databases. These databases facilitate access to and use of CTC training data. The CTC Archive databases include:

Automated Finder's Guide (AFG)
Mission Database
Mission Replay and Battle Trace
Mission Training Plan (MTP) Database
Mission Critical Event Sheets (MCES)
Take Home Package (THP) Database
Battle Damage Assessment (BDA) Database
Graphics Database

The AFG is central to the family of Archive databases. The AFG allows researchers to identify missions related to their area of interest. The AFG provides rotation/mission summary information and a catalog of other data sources available to researchers to support mission analysis.

Mission Databases provide player position location, player status, and firing data for each NTC mission for which readable digital data files are received.

Mission Replay and Battle Trace uses data directly from the mission databases to allow the analyst to replay selected NTC missions. The Replay allows the analyst to quickly trace of mission battle flow with terrain features. The Replay also provides a fixed-scale, high-resolution battle replay with terrain and choice of displayed vehicles. Player attrition summaries, engagement results, and indirect fire mission displays are also available with the Battle Replay Program.

MTP database is composed of T&EO documentation files and Unit Performance Data files (UPD) from JRTC. Both sets of files are necessary for MTP database creation. It is useful in accessing JRTC T&EOs over many rotations.

MCES provide synoptic summary of mission information. It includes the Commander's Intent, Task Organization, Concept of the Operation and a mission timeline graphic known as the Battle Flow of Events.

THP database files support automated access to NTC and JRTC THP textual data. The database expedites text selection by CTC, rotation, organization type, BOS, and specific section. It also includes the ability to search for a word or phrase within a file.

BDA database files hold CTC battle statistics. The database is useful in searching

battle statistics over many rotations.

Graphics Database files consist of imaged battlefield graphics. The original images are reduced (when necessary), scanned, and converted before being uploaded. Graphics files may be viewed and manipulated through the WinGIF shareware application found on the Combat Analyst Workstation. WinGif also allows for easy conversion of graphics files into a WordPerfect compatible file format. A researcher may then quite easily complement his or her report with battlefield graphics.

V. STATUS OF ARCHIVE DATA SOURCES
As of 30 September 1994 (By Fiscal Year and Rotation)

The period of performance for this project (Delivery Order 28) was 16 April through 30 September 1994. Quotation marks (" ") are used to identify the rotations for which data were received and processed by the CTC Archive staff at ARI, UCTRU during the period of performance for this project.

After Action Review Videocassettes:

NTC	90-01 through 90-11, 90-13
	91-02, 91-05, 91-06, 91-08, 91-10 through 91-12
	92-01 through 92-12
	93-01 through 93-12
	94-01 through 94-05, "94-06 through 94-08"
CMTC	90-01 through 90-12
	91-01 through 91-10
	92-01 through 92-06, 92-08 through 92-13
	93-01 through 93-12
	94-01, 94-02, "94-08", "94-11"
JRTC	90-01 through 90-08
	91-01 through 91-09
	92-01 through 92-09
	93-01 through 93-03

Communications Audio Tapes:

NTC	90-01 through 90-11, 90-13
	91-02, 91-05, 91-06, 91-08, 91-10, 91-11, 91-12
	92-01 through 92-12
	93-01 through 93-12
	94-01 through 94-04, "94-05 through 94-08"

CMTC   90-03 through 90-12
              91-01 through 91-10
              92-02
              93-02 through 93-09

JRTC does not send communications tapes to the Archive.

Digital Data:

NTC sends Instrumentation Data and Take Home Package (THP) files to the CTC Archive.

Instrumentation Data   90-01 through 90-07, 90-09, 90-10, 90-11, 90-13
                          91-08, 91-10, 91-11, 91-12
                          92-01 through 92-12
                          93-01 through 93-12
                          94-01 through 94-06, "94-07 through 94-09", "94-11"

THP Files   90-01 through 90-11, 90-13
                          91-02, 91-05 through 91-08, 91-10 through 91-12
                          92-01 through 92-12
                          93-01 through 93-12
                          94-01 through 94-06, "94-07 through 94-09"

CMTC does not send digital files to the CTC Archive.

JRTC digital files consist of THP, T&EO documentation files and Unit
Performance Data (UPD), BDA, and I-MILES data (for early rotations only).

THP Files   90-01 through 90-08
                          91-01, 91-03 through 91-08
                          92-04 through 92-09
                          93-01 through 93-08
                          94-01, "94-02 through 94-04"

TE&O   90-01 through 90-08
DOC Files   91-01, 91-03 through 91-09
                          92-02, 92-04 through 92-09
                          93-01 through 93-08
                          94-01, 94-02, "94-04", "94-05"

TE&O   90-01 through 90-08
UPD Files   91-01, 91-03 through 91-06, 91-08, 91-09
                          92-01 through 92-09
                          93-01 through 93-08
                          94-01, 94-02, "94-04", "94-05"

BDA   90-01 through 90-08
                              91-01, 91-03 through 91-09
                              92-01 through 92-09
                              93-01 through 93-08
                              94-01, 94-02, "94-04", "94-05"

Graphics:

Data materials from all CTCs are stored in the Archive.

NTC   90-01 through 90-11, 90-13
                              91-02, 91-05, 91-06, 91-10, 91-11
                              92-01 through 92-12
                              93-01 through 93-12
                              94-01 through 94-06, "94-07 through 94-09"

CMTC   90-01 through 90-12
                              91-01 through 91-10
                              92-01 through 92-06, 92-08 - 92-13
                              93-01, 93-02

JRTC   90-03 through 90-07
                              91-01, 91-03, 91-04, 91-07, 91-08
                              92-03 through 92-09
                              93-02 through 93-04
                              94-01 through 94-03, "94-04 through 94-07"

Orders and Plans:

Unit operations orders and plans are stored in the Archive.

NTC   90-01 through 90-11, 90-13
                              91-02, 91-05, 91-06, 91-08, 91-10 through 91-12
                              92-01 through 92-12
                              93-01 through 93-12
                              94-01 through 94-06, "94-07 through 94-09"

CMTC   90-01 through 90-12
                              91-01 through 91-10
                              92-01 through 92-06, 92-08 through 92-13
                              93-01, 93-02

JRTC   90-03 through 90-07
                              91-01 through 91-04, 91-07, 91-08
                              92-01 through 92-09
                              93-02 through 93-04
                              94-01 through 94-03, "94-04 through 94-07"

Scenario Documents:

Scenario development documents define the training situation for the rotation on a macro level. These documents are supplied by the host CTC.

JRTC
90-01 through 90-08
91-01 through 91-09
93-01 through 93-08
94-01 through 94-05, "94-06 through 94-10"

Paper THPs:

Held for all CTCs, although the content and format vary greatly by CTC and by fiscal year within each CTC.

NTC
90-01 through 90-11, 90-13
91-02, 91-05 through 91-08, 91-10 through 91-12
92-01 through 92-12
93-01 through 93-12
94-01 through 94-05, "94-06 through 94-09"

CMTC
90-01 through 90-12
91-01 through 91-10
92-01 through 92-06, 92-08 through 92-13
93-01 through 93-12
94-01, 94-02, "94-08", "94-11"

JRTC
90-01 through 90-08
91-01 through 91-09
92-01 through 92-09
93-02, 93-04 through 93-08
94-01, 94-02, "94-03 through 94-05"

VI. STATUS OF ARCHIVE DIGITAL DATABASES
as of 30 September 1994 (by fiscal year and rotation)

The period of performance for this project (Delivery Order 28) was 16 April through 30 September 1994. Quotation marks (" ") are used to identify the rotations for which data were received, processed and entered into the CTC Archive digital databases at ARI, UCTRU during the period of performance for this project.

AFG status is presented by percentage of completion in phases.

The first phase (1) of AFG data entry is the Mission Summary phase. This includes the identification, verification, and data entry of units and their missions.

The second phase (2) is composed of the Mission Statement and BDA.

Phase three (3) requires entries into the AFG catalog tables. This includes the AAR videocassette table, communications tapes table, and the resource table (provides an index of paper and digital information sources available). The database table is the last table to be completed. Data entered here provides a list of all other databases available to the researcher, e.g. the THP, BDA, Graphics databases, etc., which contain information associated with the mission in question.

Phase four (4) pertains to NTC <u>only</u> and includes the entry of the performance index for each force-on-force mission. A performance index is derived from terrain retention/capture and/or casualty exchange data.

NTC Automated Finders Guide Status Tables
September 30, 1994

Rotation	Phase 1 (Basic Mission Summary Info)	Phase 2 (Advanced Mission Summary Info)	Phase 3 (Mission Text Files)	Phase 4 (Mission Catalog Info)	Overall Percentage of Completion
90-01	100%	94%	94%	100%	97.00%
90-02	100%	100%	74%	100%	93.50%
90-03	100%	100%	56%	100%	89.00%
90-04	100%	100%	50%	100%	87.50%
90-05	92%	100%	31%	67%	72.50%
90-06	98%	100%	65%	100%	90.75%
90-07	100%	100%	66%	57%	80.75%
90-08	100%	100%	56%	25%	70.25%
90-09	100%	50%	66%	16%	56.00%
90-10	100%	100%	67%	53%	80.00%
90-11	100%	50%	69%	63%	70.50%
90-13	100%	86%	72%	60%	79.50%
91-02	100%	79%	69%	85%	83.25%
*91-05	100%	13%	49%	17%	44.75%
**91-06	100%	16%	48%	16%	45.00%
***91-07	0%	0%	0%	0%	%0.00
****91-08	100%	0%	50%	40%	47.50%
91-10	100%	63%	71%	50%	71.00%
91-11	100%	0%	0%	0%	0.00
91-12	100%	86%	50%	43%	69.75%
92-01	100%	72%	98%	67%	0.00
92-02	81%	91%	70%	12%	63.50%
92-03	97%	88%	68%	12%	66.25%
92-04	82%	50%	75%	43%	62.50%
92-05	80%	87%	75%	71%	78.25%
92-06	96%	87%	70%	10%	65.75%
92-07	94%	100%	59%	33%	71.50%
92-08	100%	91%	68%	79%	84.50%
92-09	92%	71%	93%	64%	80.00%

NTC Automated Finders Guide Status Tables
September 30, 1994

Rotation	Phase 1 (Basic Mission Summary Info)	Phase 2 (Advanced Mission Summary Info)	Phase 3 (Mission Text Files)	Phase 4 (Mission Catalog Info)	Overall Percentage of Completion
92-10	84%	62%	63%	64%	68.25%
92-11	92%	74%	92%	64%	80.50%
92-12	92%	70%	89%	66%	79.25%
93-01	100%	76%	25%	23%	56.00%
93-02	92%	65%	25%	6%	47.00%
93-03	92%	70%	70%	57%	72.25%
93-04	94%	63%	100%	62%	79.75%
93-05	92%	80%	87%	49%	77.00%
93-06	100%	76%	100%	66%	85.50%
93-07	92%	80%	95%	58%	81.25%
93-08	92%	27%	25%	67%	52.75%
93-09	100%	50%	23%	70%	60.75%
93-10	100%	57%	100%	54%	77.75%
93-11	92%	54%	23%	57%	56.50%
93-12	100%	44%	25%	50%	54.75%
94-01	100%	62%	100%	100%	90.50%
"94-02"	100%	0%	100%	0%	25.00%
"94-03"	100%	0%	100%	0%	0.00%
"94-04"	100%	0%	100%	0%	0.00%
94-05	100%	44%	82%	100%	81.50%
"94-06"	100%	0%	100%	0%	0.00%
"94-07"	100%	0%	100%	0%	50%
"94-08"	100%	0%	40%	0%	35%
"94-09"	100%	0%	0%	0%	25%

*   91-48, National Guard Rotation
**   91-155, National Guard Rotation
***   91-40, National Guard Rotation
**** 91-XX, 7th Inf Div (Light) Rotation

CMTC Automated Finders Guide Status Table
September 30, 1994

Rotation	Phase 1 (Basic Mission Summary Info)	Phase 2 (Advanced Mission Summary Info)	Phase 3 (Mission Text Files)	Phase 4 (Mission Catalog Information)	Overall Percentage of Completion
90-01	100%	85%	75%	94%	89%
90-02	100%	92%	75%	100%	92%
90-03	100%	100%	50%	100%	88%
90-04	100%	100%	75%	90%	91%
90-05	100%	100%	73%	100%	93%
90-06	100%	100%	72%	100%	93%
90-07	100%	100%	75%	100%	94%
90-08	100%	97%	74%	100%	93%
90-09	100%	100%	72%	100%	93%
90-10	100%	100%	75%	100%	94%
90-11	100%	100%	73%	100%	93%
90-12	100%	100%	75%	100%	94%
91-01	100%	96%	50%	100%	87%
91-02	100%	100%	46%	100%	87%
91-03	100%	97%	42%	73%	78%
91-04	100%	100%	48%	100%	87%
91-05	100%	100%	50%	100%	88%
91-06	100%	89%	50%	100%	85%
91-07	100%	100%	44%	89%	83%
91-08	100%	88%	50%	100%	85%
91-09	100%	93%	25%	100%	80%
91-10	100%	100%	25%	100%	81%
92-01	100%	93%	14%	43%	63%
*92-02	0%	0%	0%	0%	0%
92-03	100%	100%	0%	100%	75%
92-04	100%	63%	50%	25%	60%
92-05	100%	100%	25%	58%	71%
92-06	100%	75%	19%	85%	70%
92-08	75%	95%	100%	25%	74%
92-09	75%	100%	100%	0%	69%

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CMTC Automated Finders Guide Status Table
September 30, 1994

Rotation	Phase 1 (Basic Mission Summary Info)	Phase 2 (Advanced Mission Summary Info)	Phase 3 (Mission Text Files)	Phase 4 (Mission Catalog Information)	Overall Percentage of Completion
92-10	75%	58%	100%	0%	58%
92-11	100%	50%	100%	0%	63%
92-12	100%	100%	100%	0%	75%
92-13	100%	100%	85%	11%	74%
93-01	100%	50%	100%	0%	63%
93-02	100%	50%	75%	25%	63%
93-03	100%	88%	100%	25%	78%
93-04	100%	90%	90%	25%	76%
93-05	100%	93%	100%	21%	79%
93-12	0%	0%	0%	0%	0%

*   Spanish Rotation

JRTC Automated Finders Guide Status Table
September 30, 1994

Rotation	Phase 1 (Mission Summary Information)	Phase 2 (Mission Text Files)	Phase 3 (Mission Catalog Information)	Overall Percentage of Completion
90-01	100%	100%	50%	83%
90-02	100%	100%	50%	83%
90-03	100%	100%	50%	83%
90-04	100%	100%	50%	83%
90-05	100%	100%	50%	83%
90-06	100%	100%	50%	83%
90-07	100%	88%	50%	79%
90-08	100%	100%	50%	83%
91-01	100%	67%	50%	72%
91-02	100%	100%	50%	83%
91-03	100%	100%	25%	75%
91-04	100%	100%	25%	75%

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JRTC Automated Finders Guide Status Table
September 30, 1994

Rotation	Phase 1 (Mission Summary Information)	Phase 2 (Mission Text Files)	Phase 3 (Mission Catalog Information)	Overall Percentage of Completion
91-05	100%	100%	25%	75%
91-06	100%	100%	25%	75%
91-07	100%	88%	25%	71%
91-08	100%	84%	0%	61%
91-09	100%	67%	25%	64%
92-01	100%	92%	25%	72%
92-02	100%	100%	25%	75%
92-03	100%	100%	25%	75%
92-04	100%	100%	50%	83%
92-05	100%	100%	45%	82%
92-06	100%	84%	0%	61%
92-07	100%	75%	0%	58%
92-08	100%	100%	0%	67%
92-09	100%	67%	0%	56%
93-02	100%	87%	0%	62%
93-03	100%	58%	0%	53%
93-04	96%	59%	0%	52%
93-05	100%	0%	0%	33%
93-06	100%	0%	0%	33%
93-07	100%	0%	0%	33%
93-08	100%	0%	0%	33%
94-01	100%	50%	0%	50%
"94-02"	0%	83%	0%	28%
"94-03"	100%	0%	0%	33%
"94-04"	100%	0%	0%	33%
"94-05"	50%	0%	0%	17%

Mission Database:

NTC   90-01 through 90-06, 90-09
                                     92-01 through 92-12
                                     93-01 through 93-12
                                     94-01, 94-02, "94-03 through 94-09"

CMTC does not provide instrumentation data.

JRTC does not provide instrumentation data.

Mission Replay and Battle Trace:

NTC   90-01 through 90-06, 90-09
                                     92-01 through 92-12
                                     93-01 through 93-12
                                     94-01, 94-02, "94-03 through 94-09"

CMTC does not provide instrumentation data.

JRTC does not provide instrumentation data.

MTP database: (JRTC only)

JRTC   90-01 through 90-08
                                     91-01 through 91-09
                                     92-01 through 92-09
                                     93-01 through 93-06, 93-08
                                     94-01, 94-02, 94-04, 94-05

Mission Critical Event Sheets:

NTC   90-01 through 90-11
                                     91-05, 91-06, 91-08, 91-10 through 91-12
                                     92-01 through 92-06, "92-07 through 92-10", 92-11, 92-
                                     12
                                     93-01 through 93-04

CMTC   90-01
                                     92-01, 92-08, 92-10 through 92-12

JRTC   90-10 through 90-08
                                     92-01, 92-02, 92-06

THP Database: (Digital THP databases are only available for NTC and JRTC)

NTC	90-01 through 90-06, 90-08 through 90-10, 90-13 91-02, "91-05 through 91-08", 91-10, "91-11" 92-01 through 92-06, "92-07 through 92-10", 92-12 93-01, "93-02", "93-03", 94-04 through 94-07, "93-08", "93-09", 93-10, "93-11", 93-12 94-01, 94-02, "94-03 through 94-09"
JRTC	90-01 through 90-06, "90-07", 90-08 91-03 through 91-08 92-04 through 92-09 93-01 "93-02 through 93-05", 93-06, "93-07", 93-08 "94-01 through 94-04"

BDA database:

NTC	90-01 through 90-11, 90-13 91-02, 91-05, 91-06, 91-08, 91-10, 91-11, 91-12 92-01 through 92-12 93-01 through 93-12 94-01, 94-02, "94-03 through 94-09"
JRTC	90-01 through 90-08 91-01 through 91-09 92-01 through 92-09 93-02 through 93-04, "93-05", "93-08" 94-01, "94-02", "94-04", "94-05"
CMTC	90-01 through 90-12 91-01 through 91-12 92-01, 92-03 through 92-06, 92-08 through 92-13 93-01 through 93-05

Graphics Database:

NTC	90-01 through 90-11, 90-13 91 -02, 91-05, "91-06", "91-08", 91-10, 91-11 92-01 through 92-12 93-01 through 93-12 94-01, 94-02, "94-03 through 94-08", 94-09
JRTC	90-03 through 90-07 91-01 through 91-04, 91-07, 91-08 92-01 through 92-09 93-02 through 93-04 94-01, 94-02, "94-03 through 94-05"

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CMTC
90-01 through 90-12
91-01 through 91-10
92-01, 92-03 through 92-06, 92-08 through 92-13, 93-01, 93-0

A. Archive Areas of Concern

The CTC Archive provides an invaluable resource for military analysts to systematically identify, prioritize and resolve Army warfighting issues. The wealth of material in the Archive allows analysts to research training data to help define the scope of issues, and, more importantly, to develop solutions for the issues. However, several areas of concern currently exist that may have pronounced effects upon the Archive and may reduce the Archive's effectiveness as a resource for data analyses. This section identifies several areas of concern within the Archive and describes the potential impact of these concerns upon Archive capabilities.

Archive Issue: The CTC Archive has not received After Action Review Videocassettes from the JRTC in over a year. The last rotation that we received videocassettes for was 93-03. We have identified this issue to CPT Huggins at CALL. CPT Huggins has informed us that representatives from JRTC will make copies of all of the missing AAR tapes and send them to the Archive.

Impact: The AAR videocassettes contain invaluable SME assessment feedback to the members of player units from the platoon level through brigade covering all BOS related activities. The AAR data source enhances the military analyst's ability to better interpret statistical data from battles and OC written comments contained in the THP. The lack of comments from the AAR tapes reduces the researcher's ability to set an accurate context for battle decisions, actions and results of JRTC operations.

Archive Issue: CMTC does not send communications tapes to the CTC Archive.

Impact: In response to an inquiry from the Commander, CALL-LVN at an IPR on 20 October 1993, ARI reopened the issue of archiving commo tapes from CMTC, and explored alternatives for accomplishing same. While representatives from the CMTC expressed a willingness to provide copies of the tapes for the Archive, discussions revealed a number of factors bearing directly on the feasibility of accomplishment as well as the payoff of this:

• First, there would be problems in duplicating the tapes: the CMTC does not have the capabilities to duplicate the tapes, though the Vipers do; the Vipers, pressed to process the 500-600 commo tapes per rotation, could not duplicate them during or immediately after the rotation, but may be able to provide them some thirty or sixty days later.

• Second, the process will be expensive, since the tapes themselves cost in the neighborhood of $9.00 each, and there may be a labor charge on top of that for

providing a service unspecified in the support contract.

- Third, until the Archive receives it's CMTC Home Station Work Station (HSWS), the tapes, which are recorded digitally on VHS cassettes, will be useless because they can be played only on the HSWS, and according to representatives from the CMTC, their contents cannot be transposed to audio tapes for playback on conventional audio tape machines.

- Fourth, many of the tapes are blank, or have little traffic on them, since the tapes are run for 24 hours continuously during the conduct of the exercise.

Acknowledging that a materials-only cost of $4,500 - $5,400 per rotation for commo tapes, many of which are of limited, if any, value, is excessive, ARI and CMTC agreed to explore possibilities for identifying which tapes in particular (identified by net and scenario phase) might offer sufficient payoff to warrant selective archiving. CMTC agreed to FAX ARI a list of nets that are monitored/recorded. ARI will explore with CALL-LVN which nets to retain in the Archive.

Archive Issue: The NTC has occasionally failed to notify ARI-POM about format revisions and version updates to the NTC instrumented data.

Impact: This is an issue that will require contract modifications. Pat Whitmarsh, ARI, and Mike Korandovitch, the COR at NTC, are working on this issue. CTIES and STRICOM are involved in this issue. ARI-POM must receive the data format changes and version updates in order to keep the database loading software current. The mission databases and battle replays cannot be properly maintained without current database loading software.

Archive Issue: The CMTC does not send instrumented data or digital THP data files to the CTC Archive and the JRTC does not send instrumented data to the Archive.

Impact: During FY 94 CMTC and JRTC will start sending instrumented data to the CTC Archive for processing. In order for ARI-POM to be able to process the automated data that will be collected at CMTC and JRTC it is imperative that the data be sent with adequate documentation detailing the contents and format of the data streams. Once the data and documentation are received, software will be developed at ARI-POM that will make the data available to analysts in a relational database format. The Archive currently holds only the hard copy versions of THPs from the CMTC. This situation prevents the automated review of THPs from the CMTC and eliminates a researchers ability to access remotely battle statistics and OC mission feedback data that are contained in the THPs.

Archive Issue: The NTC has modified the format that will be used to report BDA data to the CTC Archive as of rotation 94-04.

Impact: Modifications to the existing BDA Database structure may be necessary to accommodate the new NTC format. The entire listing of weapons and targets in the BDA Database should be reviewed and modified based on the current NTC format for reporting BDA data.

Archive Issue: Rotations 93-06 to 94-02 at the CMTC involved Peace Keeping Operations (PKO) and Operations Other Than War (OOTW) with data elements that differ significantly from warfighting data. As an example, the BDA categories contained in the PKO data sources do not exist in the current BDA Database. The JRTC is starting to conduct PKOs and OOTWs.

Impact: The Archive staff has not entered any digital PKO data or OOTW data into the CTC Archive databases to date because of the unique nature of PKO and OOTW exercises. In addition, some of the data derived from PKO and OOTW exercises is not compatible with the structure of the existing CTC Archive databases that were developed to accommodate warfighting data.

Archive Issue: Several important software updates, modifications and conversions were accomplished in 1994. The software systems affected by these changes include: the Automated Finder's Guide, the Graphics Database, the Battle Replay Tool and the Automated THP Viewer.

Impact: These software changes were necessary because of the implementation of the Novell Network and the Archive requirement to support the analysis of NTC rotation 94-07 data.